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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,594	10/28/2003	George William Forrest	PC25474A	5368

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EXAMINER	
BERNHARDT, EMILY B	
ART UNIT	**PAPER NUMBER**
1624	

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/695,594	FORREST ET AL.	
	Examiner	Art Unit	
	Emily Bernhardt	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *8-15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/16/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-7, drawn to compounds, simple compositions where Ar= benzisothiazole,benzisoxazole and oxides thereof and indazoles, classified in class 544, subclasses 368,371;class 514 subclasses 254.04,254.06.

II. Claims 1,3,4,6 and 7, drawn to compounds, simple compositions where Ar= benzthiadiazoles,benzoxazole,benzoxazolonyl, classified in class 544, subclasses 368; class 514 subclasses 254.02, 254.03.

III. Claims 1,3,4,6 and 7, drawn to compounds, simple compositions where Ar= pyridyl,quinolinyl,isoquinolinyl and phthalazinyl, classified in class 544, subclasses various such as 237,363,364; class 514 subclasses 248, 253.05,etc.

IV. Claims 1,3,4,6 and 7, drawn to compounds, simple compositions where Ar=benzotriazolyl, classified in class 544, subclass 366;class 514 subclass 254.06.

V. Claims 1,3,4,6 and 7, drawn to compounds, simple compositions where Ar=naphthyl, indanyl and indolyl, classified in class 544, subclass 373; class 514 subclass 254.09.

VI. Claims 8-14, drawn to multiple uses employing compounds of I-V, classified in class 514, subclasses various as indicated in the above groups.

VII. Claim 15, drawn to multiple uses employing compounds of I-V and additional active ingredients, classified in class 514, subclasses as determined by the exact nature of ingredients employed.

If Group VI is elected applicants must pick a single use and a compound group .

If Group VII is elected applicants must pick a single use, a compound group and an ultimate species pair of active ingredients. If I-VI is elected an ultimate single species is also needed .

The inventions are distinct, each from the other because of the following reasons: Compounds within groups I-V relate to compounds of considerable structural dissimilarity in view of the varying nature of ring systems permitted at Ar. Thus they are separately classified. Each can support a patent as the compounds of each group are capable of being utilized alone not in combination with other members listed in the Markush group and are not art-recognized equivalents as evident at the very least by the art applied below directed to only part of elected subject matter.

Inventions I-V and VI are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case a variety of uses are urged for the compounds of the invention which may separate issues from an examination of just the compound/composition claims.

Additionally, compounds employed in I-V may be old or obvious for a particular use when separately employed but may be patentable due to superior, or synergistic properties not present for the individual components in I-V. Within groups VII there is more than one invention as the claims embrace multiple combinations for a variety of uses which require independent searches and which are not art-recognized equivalents in the art.

During a telephone conversation with Ms. Harvey on 11/13/05 a provisional election was made with right of traverse to prosecute the invention of I, claims 1-7 and in particular species of eg.2 (present in claim 5). Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-15 are

withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of In re Ochiai, In re Brouwer and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least

one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. "Preferably" in the Ar and R definitions for substituents renders the scope unclear as to what is being claimed- subject before or after the term.

2. After the "R" definition, the phrase "and wherein...in such compound" appears superfluous since "R" only appears as part of "N" as a linker and only once.

3. The plethora of intended uses present in the composition claim 7, renders the intended "amount" ambiguous since it is not conceivable that the dosage regimens for uses as varied as depression vs neurodegenerative disorders vs. addictive disorders would all be the same and there is nothing in the specification pointing to a particular regimen for the many recited uses. It is suggested that the uses be deleted since only one use is needed to support such a claim for compliance with 35 USC 112 and 101. See last paragraph of MPEP 2164.01(c), May 2, 2004 edition.

4. Claim 5 appears incomplete as no period is present and no "and" preceding 2nd last species in the claim.

Claims 1-4 and 6-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specification is not adequately enabled for the scope of piperazines claimed which permit attachment of the azole ring systems at every location including substituents on this ring system and indole ring system which includes heteroaryls which can be monocyclic, bicyclic and further substituted with more groups. There is no reasonable basis for assuming that the myriad of compounds embraced by the all the generic claims will all share the same physiological properties since they are so structurally dissimilar as to be chemically non-equivalent and there is no basis in the prior art for assuming the same. Note In re Surrey 151 USPQ 724 regarding sufficiency of disclosure for a Markush group. Also see MPEP 2164.03 for enablement requirements in cases directed to structure-sensitive arts such as the pharmaceutical art.

Also note the criteria for enablement as set out in In re Wands cited in MPEP 2164.01(a),August 2000 edition, which includes factors such as:

1) Breadth of the claims- the claims cover compounds easily in the millions as pointed out above;

2) Level of unpredictability in the art- the invention is pharmaceutical in nature as it involves binding to serotonin (5HT2A) and dopamine (D2) receptors. It is well established that "the scope of enablement varies inversely with the degree of unpredictability of the factors involved" and physiological activity is generally considered to be unpredictable. See In re Fisher 166 USPQ 18;

3) Direction or guidance- as stated above the compounds made are not representative of the instant scope but are closer to each other than to remaining scope being always unsubstituted on the azole ring system which is attached to the piperazine ring at the 3-position and substituted with alkyl groups on the olefin or spiro group at R4/R5;

4) State of the prior art- The compounds are piperazine derivatives with benzofused rings at one end and indolinone connected via alkylene, etc. at the other end as well as spirofused derivatives thereof with substitution permitted at various ring positions. While such compounds are known as evident from the art applied below, they are similar in structure to the compounds made herein and thus

do not evidence the many structural permutations permitted in the instant scope are known for at least one use in the prior art;

5) Working examples- While test data has been presented a range is reported for compounds actually made which are closer to each other than to remaining scope and thus no clear evaluation of which functional groups at various positions out of the many claimed might affect potency to a large or small degree.

For the above reasons this rejection is applied.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1,2,6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe (EP'309) or Watsky (US'766) in view of Howard (US'747). The primary references each teach spiro fusion at indolone ring system with a cyclopentane ring. See 6th species in example 16 in either reference. While said species has been excluded by applicants' proviso, it is very similar to cyclopropyl fusion embraced herein since the sole difference is the size of the cycloalkyl ring- 5 vs instant 3 herein. Compounds that are homologs are not deemed patentably distinct absent evidence of superior, unexpected results. Note

Ex parte Ruddy 121 USPQ 427;Ex parte Nathan 121 USPQ 349; In re Shetty 195 USPQ 753 regarding the patentability of homologs.

However, Howard is applied to show that in similar compounds to that described in the primary references cyclopropyl is expressly taught and exemplified as part of a spiro ring system for quinolinones taught therein.

Thus it would have been obvious to one skilled in the art at the time the invention was made to expect corresponding cyclopropyl-fused indolones to be also useful as antipsychotics in view of the close structural similarity outlined above as well as equivalency teaching teaching in the same art area.

Claim 5 is not rejected since the relevant species therein are further di- and tri-alkylated on the cyclopropane ring which is not taught or suggested by the closest art cited above.

Was the last proviso in claim 1 necessitated by prior art? If so its identification is requested.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Bernhardt whose telephone number is 571-272-0664.

If attempts to reach the examiner by telephone are unsuccessful, the acting supervisor for AU 1624, James O. Wilson can be reached at 571-272-0661. The

fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

E Bernhardt

Emily Bernhardt
Primary Examiner
Art Unit 1624